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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,782	06/11/2001	Roy McNeil	FJPR-167XX	1478
207	7590	02/01/2005	EXAMINER	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP			SHEW, JOHN	
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BOSTON, MA 02109			PAPER NUMBER	
			2664	

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,782

Applicant(s)

MCNEIL ET AL.

Examiner

John L Shew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 2-3,9-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09172001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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2. Claims 1 and 8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 09/878759. Although the conflicting claims are not identical, they are not patentably distinct from each other because the communications network device of claims 1 and 8 are obviously equal to the communications network device of application 09/878759 claims 1 and 8.

Claim 1 cites

"A communications network, comprising: a communications medium carrying a synchronous communications transport signal including a plurality of time-division-multiplexed (TDM) channels; at least three bridges, each bridge having an interface to an associated one of a plurality of local area network (LAN) segments; and a plurality of add-drop circuits, each add-drop circuit being associated with a corresponding different one of the bridges and coupling the associated bridge to the communications medium, each add-drop circuit being operative to (i) group a plurality of the TDM channels of the communication transport signal into a bundle, (ii) schedule the use of the bundle to carry data traffic originated by the associated bridge and to carry data traffic originated by the other bridges, (iii) in accordance with the scheduling, transmit data traffic originated by the associated bridge and destined for the other bridges on the bundle".

Application 09/878759 claim 1 cites

"A communications network, comprising: a communications medium carrying a synchronous communications transport signal including a plurality of time-division-

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multiplexed (TDM) channels; at least three bridges, each bridge having an interface to an associated one of a plurality of local area network (LAN) segments; and a plurality of add-drop circuits, each add-drop circuit being associated with a corresponding different one of the bridges and coupling the associated bridge to the communications medium, each add-drop circuit being operative to (i) group the TDM channels of the communications transport signal into bundles, each bundle being associated with a corresponding different one of the bridges, (ii) transmit data traffic originated by the associated bridge and destined for the other bridges on only the bundle associated with the associated bridge,”.

Claim 1 of application 09/878759 claim 1 does not claim scheduling of a bundle.

The bundling of the TDM channels would have been obviously associated to the scheduling of the data traffic for the associated bridge. Scheduling is inherent to the bundling since all time-division-multiplexed data must schedule transmission times. The scheduling of data traffic must include traffic from the associated bridge as well as traffic passing through from other bridges and are thus bundled together.

Claim 1 cites

“(iv) receive data traffic from the other bridges via the bundle, (v) determine whether the received data traffic from the other bridges is destined for the associated bridge, and if so then forward such received data traffic to the associated bridge, and (vi) if the received data traffic is destined for one of the other bridges, then, in accordance with

the scheduling, re-transmit such received data traffic on the bundle for receipt by the add-drop circuit associated with the destination bridge.”.

Application 09/878759 claim 1 cites

“(iii) receive data traffic from the other bridges via the bundles associated with the other bridges, (iv) forward the received data traffic to the associated bridge, and (v) re-transmit at least some of the received data traffic on the bundles for receipt by at least another one of the add-drop circuits.”.

Claim 1 cites the determination of whether the received traffic is destined for the associated bridge whereas application 09/878759 claim 1 cites forwarding the received data to the associated bridge.

The reception of data traffic in bundles is inclusive of bundles associated with the bridge and from other bridges since both are scheduled together. The determination of received data traffic for the associated bridge would have been obviously the same as forwarding the data traffic to the associated bridge since address filtering makes this determination. The re-transmit of received data traffic for receipt by the destination bridge would have been obviously the same as the re-transmit of received data traffic by at least another add-drop circuit since the other add-drop circuit is associated to another destination bridge.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 8 cites

"A network communications device, comprising: an interface to a communications medium carrying a synchronous communications transport signal including a plurality of time-division-multiplexed (TDM) channels; a local bridge having an interface to a local area network (LAN) segment; and an add-drop circuit coupling the local bridge to the communications medium, the add-drop circuit being operative to (i) group a plurality of the TDM channels of the communications transport signal into a bundle, (ii) schedule the use of the bundle to carry data traffic originated by the local bridge and to carry data traffic originated by other bridges coupled to the communications medium by other add-drop circuits, (iii) in accordance with the scheduling, transmit data traffic originated by the local bridge and destined for the other bridges on the bundle,".

Application 09/878759 claim 8 cites

"A network communications device, comprising: an interface to a communications medium carrying a synchronous communications transport signal including a plurality of time-division-multiplexed (TDM) channels; a local bridge having an interface to a local area network (LAN) segment; and an add-drop circuit coupling the local bridge to the communications medium, the add-drop circuit being operative to (i) group the TDM channels of the communications transport signal into bundles, one bundle being associated with the local bridge and each other bundle being associated with a corresponding different one of other bridges coupled to the communications medium by

associated other add-drop circuits, (ii) transmit data traffic originated by the local bridge and destined for the other bridges on only the bundle associated with the local bridge,”.

Claim 1 cites scheduling the use of the bundle whereas application 09/878759 claim 1 only cites a group of TDM channels to a bundle.

The bundling of the TDM channels would have been obviously associated to the scheduling of the data traffic for the associated bridge. The scheduling of data traffic must include traffic from the associated bridge as well as traffic passing through from other bridges and are thus bundled together.

Claim 8 cites

“(iv) receive data traffic from the other bridges via the bundle, (v) determine whether the received data traffic from the other bridges is destined for the local bridge, and if so then forward such received data traffic to the local bridge, and (vi) if the received data traffic is destined for one of the other bridges, then, in accordance with the scheduling, re-transmit such received data traffic on the bundle for receipt by the add-drop circuit associated with the destination bridge.”.

Application 09/878759 claim 8 cites

“(iii) receive data traffic from the other bridges via the bundles associated with the other bridges, (iv) forward the received data traffic to the local bridge, and (v) re-transmit at least some of the received data traffic on the bundles for receipt by at least another one of the add-drop circuits.”.

Claim 8 cites the determination of whether the received data is destined for the local bridge whereas application 09/878759 claim 8 cites the forward of received data to the local bridge.

The reception of data traffic in bundles is inclusive of bundles local to the bridge and from other non-local bridges since both are scheduled together. The determination of received data traffic for the local bridge would have been obviously the same as forwarding the data traffic to the local bridge since address filtering makes this determination. The re-transmit of received data traffic for receipt by the destination bridge would have been obviously the same as the re-transmit of received data traffic by at least another add-drop circuit since the other add-drop circuit is associated to another destination bridge.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 7, 8, 11, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coden (Patent Number 6389030), in view of Jha (Patent Number 6778561).

Claim 1, Coden teaches a communications network (Fig. 2, Abstract lines 1-4) referenced by the communications network 200 for internet access, comprising a communications medium carrying a synchronous communications transport signal including a plurality of time division-multiplexed (TDM) channels (Fig. 2, column 1 lines 46-67, column 2 lines 1-2) referenced by the ring network 1102-1 through 1102-N of a SONET ring transport medium which is well known in the art to use time division multiplexed channels, at least three bridges (Fig. 2) referenced by the Ring Switches 104-1 through 104-N, each bridge having an interface to an associated one of a plurality of local area network (LAN) segments (Fig. 2) referenced by the ring switch local ports each connecting to a respective LAN, and a plurality of ring transceiver circuits (Fig. 2) referenced by ring transceivers 1102-1 through 1102-N, each ring transceiver circuit being associated with a corresponding different one of the bridges (Fig. 2) referenced by each ring transceiver associated with different Ring Switches 104-1 through 104-N, and coupling the associated bridge to the communications medium (Fig. 2) referenced by the coupling of the Ring Transceiver between the Ring Switch's Ring Interface to the ring transport medium, in accordance with the scheduling transmit data traffic originated

by the associated bridge, receive data traffic from the other bridges via the traffic channels (Fig.2, column 2 lines 35-39) referenced by the ring switch receiving packets from a unidirectional ring, determine whether the received data traffic from the other bridges is destined for the associated bridge and if so then forward such received data traffic to the associated bridge (Fig. 4) referenced by the step 1216 where the Destination Address of the Input Packet is compared to the Source Address for any port and step 1218 where a match is found and the packet is transmitted to the port with the Source Address of the Address Table equal to the Destination Address of the Input Packet, and if the received data traffic is destined for one of the other bridges then in accordance with the scheduling re-transmit such received data traffic on the bundle for receipt by the traffic channel circuit associated with the destination bridge (Fig. 4) referenced by the step 1224 where the Source Address of the Input Packet is for the Ring-Out Port and is transmitted back onto the ring for another ring switch.

Coden does not teach add-drop circuits, grouping a plurality of TDM channels into a bundle nor scheduling of data traffic.

Jha teaches add-drop circuits (FIG. 6, column 7 lines 36-40) referenced by the Add Drop Multiplexer for the SONET network.

Jha teaches grouping a plurality of the TDM channels of the communications transport signal into a bundle (FIG. 1) referenced by the TDM bundle 12a transported by the SONET fiber line.

Jha teaches schedule the use of channels to carry data traffic originated by the associated bridge and to carry data traffic originated by the other bridges (FIG. 13)

referenced by the determination of "TDM Channel ?" step 408 and the "Store Packet. Create Null SDL Packet in Remaining Area" step, in accordance with the scheduling transmit data traffic originated by the associated bridge and destined for the other bridges on the bundle (FIG. 13) referenced by the "Packet in Buffer Ready for TX" step. It would have been obvious to one of ordinary skill in the art at the time the invention was made to schedule and bundle the TDM signals as taught by Jha to the SONET ring network of Coden for the purpose of transmitting information via a network comprising one or more packets of different data types.

Claim 4, Coden teaches a ring network with internet access. Coden does not teach TDM channels having equal data-carrying capacities.

Jha teaches the TDM channels of the communications transport signal have equal data-carrying capacities (FIG. 1) referenced by the TDM data stream wherein each packet has identical period of 125us and identical Virtual Tributary capacities.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to bundle the TDM signals into equal time slots as taught by Jha to the SONET ring network of Coden for the purpose of transmitting information via a network comprising one or more packets of different data types.

Claim 6, Coden teaches each LAN segment employs a shared electrical medium (Fig. 3) referenced by the common bus of the LAN 308-1 between the Ring Switch 304-1 Local Ports to the devices A, B and C.

Claim 7, Coden teaches the communications medium is an optical medium (Fig. 2, column 1 lines 40-55) referenced by the SONET ring which uses an optical medium.

Claim 8, Coden teaches a network communications device (Fig. 2) referenced by Ring Transceiver 1102-1, comprising an interface to a communications medium carrying a synchronous communications transport signal (column 1 lines 40-55) referenced by the Synchronous Optical NETwork ring of the Ring Transceiver as a synchronous transport medium, a local bridge having an interface to a local area network (LAN) segment (Fig. 2) referenced by the Ring Switch 104-3 to connected to a local network, a channel circuit coupling the local bridge to the communications medium (Fig. 2) referenced by the Ring Transceiver coupling the Ring Switch to the SONET ring, receive data traffic from the other bridges via the traffic channels (Fig.2, column 2 lines 35-39) referenced by the ring switch receiving packets from a unidirectional ring, determine whether the received data traffic from the other bridges is destined for the local bridge and if so then forward such received data traffic to the local bridge (Fig. 4) referenced by the step 1216 where the Destination Address of the Input Packet is compared to the Source Address for any port and step 1218 where a match is found and the packet is transmitted to the port with the Source Address of the Address Table equal to the Destination Address of the Input Packet, and if the received data traffic is destined for one of the other bridges then in accordance with the scheduling re-transmit such received data traffic on the bundle for receipt by the traffic channel circuit associate with

the destination bridge (Fig. 4) referenced by the step 1224 where the Source Address of the Input Packet is for the Ring-Out Port and is transmitted back onto the ring for another ring switch.

Coden does not teach add-drop circuits, grouping a plurality of TDM channels into a bundle nor scheduling of data traffic.

Jha teaches add-drop circuits (FIG. 6, column 7 lines 36-40) referenced by the Add Drop Multiplexer for the SONET network.

Jha teaches grouping a plurality of the TDM channels of the communications transport signal into a bundle (FIG. 1) referenced by the TDM bundle 12a transported by the SONET fiber line through the ADM.

Jha teaches schedule the use of the bundle to carry data traffic originated by the local bridge and to carry data traffic originated by other bridges coupled to the communications medium by other add-drop circuits (FIG. 13) referenced by "RX packet from System" step 401 and the determination of "TDM Channel ?" step 408 and the "Store Packet. Create Null SDL Packet in Remaining Area" step, in accordance with the scheduling transmit data traffic originated by the local bridge and destined for the other bridges on the bundle (FIG. 13) referenced by the "Packet in Buffer Ready for TX" step. It would have been obvious to one of ordinary skill in the art at the time the invention was made to schedule and bundle the TDM signals as taught by Jha to the SONET ring network of Coden for the purpose of transmitting information via a network comprising one or more packets of different data types.

Claim 11, Coden teaches a ring network with internet access. Coden does not teach TDM channels having equal data-carrying capacities.

Jha teaches the TDM channels of the communications transport signal have equal data-carrying capacities (FIG. 1) referenced by the TDM data stream wherein each packet has identical period of 125us and identical Virtual Tributary capacities.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to bundle the TDM signals into equal time slots as taught by Jha to the SONET ring network of Coden for the purpose of transmitting information via a network comprising one or more packets of different data types.

Claim 13, Coden teaches each LAN segment employs a shared electrical medium (Fig. 3) referenced by the common bus of the LAN 308-1 between the Ring Switch 304-1 Local Ports to the devices A, B and C.

Claim 14, Coden teaches the communications medium is an optical medium (Fig. 2, column 1 lines 40-55) referenced by the SONET ring which uses an optical medium.

2. Claims 5, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coden and Jha as applied to claims 1, 4, 6, 7, 8, 11, 13, 14 above, and further in view of Schmidt et al (Patent Number 6205154).

Claims 5, 12, Coden and Jha teach a SONET ring network using TDM virtual tributaries.

They do not teach the number of TDM channels is 28.

Schmidt teaches the number of TDM channels included in the communications transport signal is 28 (column 3 lines 50-54) referenced by the STS-1 channels having 28 VT1.5 channels each carrying a T1 service.

Allowable Subject Matter

3. Claims 2, 3, 9, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art search did not disclose an add-drop multiplexer maintaining a scheduling table including internal and external slots containing information on the amount of transmission data.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent number 6628652, Chrin et al. discloses a flexible telecommunications switching network. Patent number 6407834, Takeshita et al. discloses an optical wave network system and method of monitoring a network trouble. Patent number 6188701, Tsukamoto et al. discloses an apparatus and method for interfacing between communication networks. Patent number 6122249, Mochizuki et al. discloses an add-drop multiplexing apparatus.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Shew whose telephone number is 571-272-3137. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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